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AMPHIBIANS AND REPTILES OF THE  
CHICAGO REGION

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It has been nearly a hundred years since the first, and only, list of Chicago Area reptiles and amphibians was published by Robert Kennicott (1855). In the interim some collecting has been going on, but without much direction or object, many specimens having been accumulated by the two institutions with which we are associated. This paper is drawn up with the intent of crystallizing our present knowledge of the local herpetological fauna, and to point out the more important gaps in our collections.

The amount of material is too small and the distribution of locality records too erratic to warrant much attempt at generalization regarding the distribution of the species of this area. It is interesting that the area under consideration is cut by the edges of the ranges of certain forms such as the garter snakes, *T. butleri* and *radix*, and the spotted turtle and includes the area of intergradation between some pairs of subspecies like the painted turtles, *Chrysemys picta marginata*, and *C. p. bellii*. Life history notes for all of the species in our region are greatly to be desired. The information thus far available is too fragmentary to warrant its inclusion in the present paper.

The literature, on the whole, is totally unusable, with the exception of two popular leaflets on Caudata and Salientia written by the

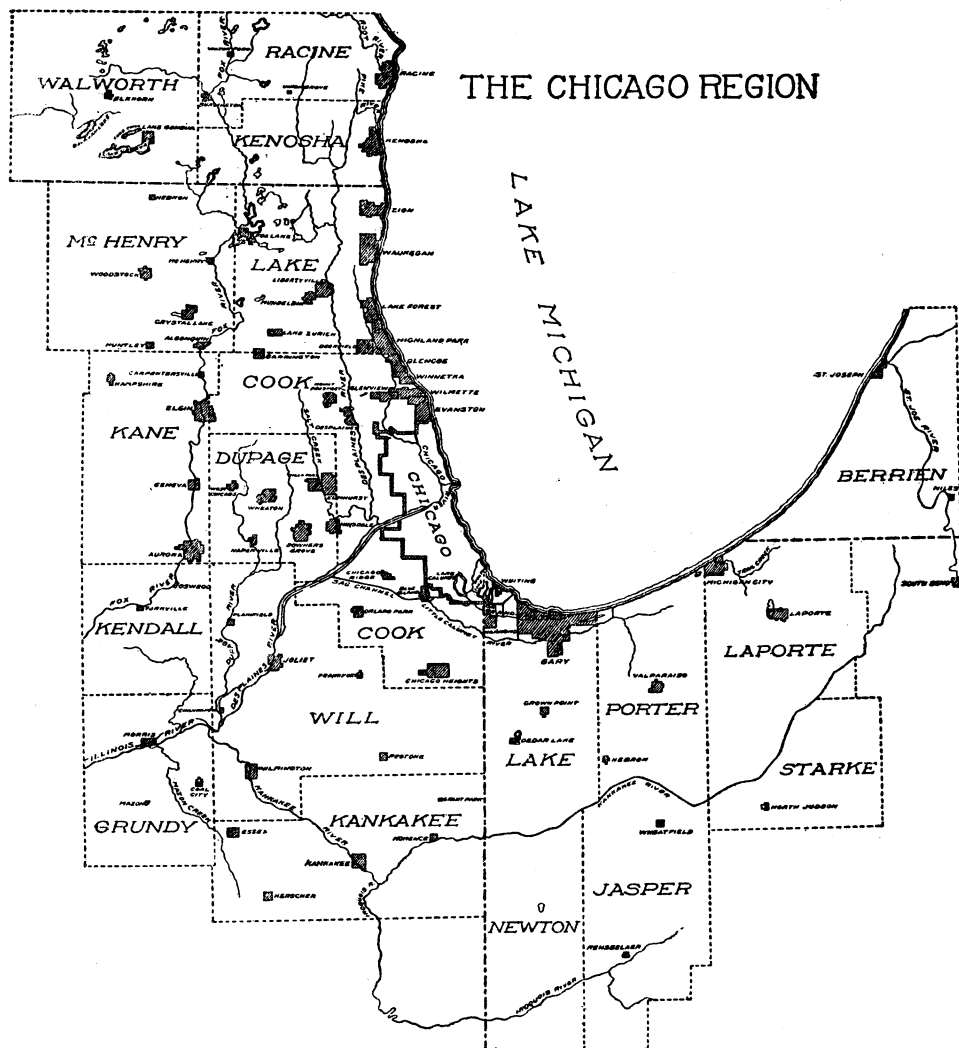
senior author in 1929 and 1930, respectively; to the former, however, two (perhaps three) species must already be added. Shelford's (1913) study of the animal ecology of this area is regrettably incomplete, and in places inaccurate as far as herpetology is concerned. Pope and Dickinson's work (1928) on Wisconsin is an uncritical compilation, while the somewhat comprehensive reports on Illinois and Indiana by Garman (1892) and Hay (1892) are too old to be really useful. The excellent little handbook on the Herpetology of Michigan by Ruthven, Thompson and Gaige (1928) treats most of our species but, of course, treats only a small section of the "Chicago Area" as defined by us. Critically compiled local and county lists, which are a useful aid in working out species distribution, are non-existent for our area.

A key to the amphibians and reptiles of Illinois is in preparation by the junior author, who has also drawn up a complete synonymic list of the Illinois herpetological literature, in which the nomenclature is extraordinarily complicated and at variance with the forms in current use. (Necker, 1934, abstract). These papers when published will supplement the present list.

The Chicago Region is often defined as the area included within a circle of fifty miles radius whose center is the inter-section of State and Madison Streets in Chicago. For the purpose of more extended studies, we have included all of the counties which are cut by this line. Parts of Wisconsin, Illinois, Indiana, and Michigan, are consequently included in our area. Good maps, showing all localities listed in the following pages, are non-extant. The *Chicago Tribune* road map, however, is fairly good; for a more restricted "Chicago Area" the map in Shelford's book is excellent, but regrettably without index; the localities in the "Indiana Dunes" are all on Goodman's map of that region, published by Rand McNally. The recently published *Physiography of the Region of Chicago* by Fryxell fills a great need, and is recommended as an accessory to all natural history studies of our area; it has four excellent colored maps illustrating glacial features, relief, drainage, and soil, but is slightly less inclusive than our definition of the area.

Several localities need special mention. All localities now a part of Chicago, having practically lost their identity (like Budlong's Woods), are listed merely under "Chicago" unless some special interest is attached to them. There is some confusion in the use of place names in the Indiana Dunes: Ogden Dunes and Wickliffe, Wilson and Dune Park, Dune Acres and Mineral Springs, Port Chester and Waverly, Tremont and Indiana Dunes State Park (the first listed being used here), are pairs of names referring to the same locality. Beach, Lake County, Illinois, is a railway stop between Waukegan and Zion, and is often referred to as Waukegan Flats and may even be called Illinois Dune Park,

a name given to it by a present group of "developers". Illinois is at the edge of Kankakee County, Illinois, but since all collecting has been done across the state line it is listed under Lake County, Indiana. All other localities are readily found on the maps referred to.



We do not repeat the Wisconsin records based on specimens sent by P. R. Hoy to the National Museum from Racine. It seems evident that these were collected in Ohio at the former residence of Dr. Hoy. Neither do we accept a number of Kennicott's specimens reputed to have come from "N. Ill." or "W. Northfield" since they represent southern species. Museum mis-cataloging is no doubt the reason for these errors since the same species *were* collected by Kennicott in Union County, Illinois. Certain other species have been reported, doubtless through mis-identification. The list of species thus deleted from the Chicago Region herpetofauna follows:

*Plethodon glutinosus* (Green). Slimy Salamander.  
*Pseudotriton ruber* (Sonnini). Red Salamander.  
*Eurycea longicauda* (Green). Long Tailed Salamander.  
*Desmognathus fuscus* (Rafinesque). Dusky Salamander.  
*Leiopeltis laterale* (Say). Little Brown Skink.  
*Opheodrys aestivus* (Linnaeus). Rough Green Snake.  
*Elaphe guttata* (Linnaeus). Corn Snake.  
*Thamnophis ordinoides vagrans* (Baird and Girard).  
*Amyda ferox* (Schneider). Southern Softshell Turtle.

Five doubtful species deserve special mention:

*Ambystoma opacum* (Gravenhorst). Opaque Salamander. A single specimen was brought to the museum from Wilson, Porter County, Indiana by Tim Giddern in 1933. The clerk who accepted it did not question the donor, who has not been heard from since. Collecting in the vicinity of Wilson has not turned up additional specimens. Kennicott specimens from W. Northfield are in the U. S. National Museum, but the data must be questioned until further specimens are available, since Kennicott collected so actively in Union County where this species is abundant.

*Rana areolata* (Baird and Girard). Crayfish Frog. The type of *Rana areolata circulosa* Davis and Rice, C. A. S. No. 160 (part of the former Northwestern University collection) from "Northern Indiana" and two specimens (U. S. National Museum No. 9386) collected by Robert Kennicott from "Northern Illinois" are the only records available. It seems likely that this species may have been exterminated by agricultural drainage in most of our area, as it is otherwise recorded north to Bloomington, Illinois and to Benton County, Indiana.

*Carphophis amoena helenae* (Kennicott). Helen Tennison's Snake. Recorded by Kennicott (1855) but no specimens are to be found. The secretive nature of this species or its possible extermination may be the reason for the lack of specimens. The nearest record of which we are certain is Turkey Run, Indiana.

*Diadophis punctatus* ssp. Ring-necked Snake. Some form of *Diadophis punctatus* should occur in our region, since *D. p. edwardsii*, common in northern Wisconsin reaches Milwaukee County. *D. p. arnyi* ranges from Ohio to Kansas, thus apparently ranging through our area, and is replaced in southern Illinois by *D. p. stictogenys*. No specimens of *Diadophis* are available except C. A. S. No. 924, which is clearly *D. p. arnyi*, preserved by F. M. Woodruff in 1878, and said to be from "Cook Co.". This secretive snake should persist with the *Storerias*; its unusual beauty is likely to lead to the transport of terrarium individuals; and we accordingly omit the species from our list until it can be authentically traced into our area.

*Crotalus horridus* (Linnaeus). Timber Rattler. Certainly not at present a member of our fauna. Kennicott includes it in his Cook County list in 1855 at which time, we admit, it may have occurred even though there are no typical habitats within our area at this time. There are at least two islands of *Crotalus*, one within twenty miles, the other within eighty miles of the limits of the Chicago Region.

The following annotated list records only specimens in the Chicago Academy of Sciences (designated by "A") and Field Museum of Natural History (designated by "F."), since we are unable to rely on other lists and records. Dr. Orlando Park at Northwestern University, has begun a collection of the local fauna which in a few years will be of great value to local studies. Major Chapman Grant also has a collection, soon to be reported on by himself, from Northern Indiana, which will add considerably to our knowledge of local distribution.

The order followed is that of the third edition of Stejneger and Barbour's Check List. The approximately two thousand specimens recorded here fall into fifty-one species, as follows:

CAUDATA. Salamanders	-	-	-	-	-	-	9
SALIENTIA. Frogs and toads	-	-	-	-	-	-	11
SAURIA. Lizards	-	-	-	-	-	-	3
SERPENTES. Snakes	-	-	-	-	-	-	18
TESTUDINATA. Turtles	-	-	-	-	-	-	10

## ANNOTATED LIST OF SPECIES

## AMPHIBIA

## CAUDATA—SALAMANDERS

**Necturus maculosus maculosus** (Rafinesque). Mud puppy,  
Water Lizard.

ILLINOIS. COOK Co.: A. 293; Chicago, F. 443, 450, 1802, 2071; Des-  
plaines River, F. 2801; Evanston, A. 220; Lake Michigan, A. 218-9. DUPAGE  
Co.: Naperville, F. 22209. KANE Co.: Carpentersville, F. 11983. MCHENRY  
Co.: Algonquin, F. 12621, 14799.

INDIANA. LAKE Co.: Wolf Lake, F. 2070.

The abundance of this species in Lake Michigan and a possible sea-  
sonal migration to and from the lake, afford the most obvious questions  
with regard to this species in our area. Neither eggs nor larvae have  
been recorded within our limits.

**Triturus viridescens louisianensis** (Wolterstorff). Newt.

ILLINOIS. COOK Co.: A. 266; Glendon Park, F. 3484; Palos Park, F.  
11881-2; Willow Springs, F. 1897, 2765, 18198. LAKE Co.: Deerfield, F. 16766,  
19205-6, 20880.

INDIANA. LAKE Co.: Miller, F. 11158, 17135; Osborn, F. 5950; Pine,  
F. 11048.

WISCONSIN. WALWORTH Co.: Delavan, F. 12365.

The use of the name *symmetrica* Harlan for the striped newt of  
North Carolina, which appears to be correct, necessitates the use of  
Wolterstorff's name for the common newt of the Atlantic and Gulf  
Coastal Plains, which does not have a "red eft" land stage. The newt  
of our area agrees best with this form. Transformation takes place on  
floating vegetation in ponds at Miller, Indiana, and a considerable pro-  
portion of adults retain traces of external gills.

**Ambystoma jeffersonianum** (Green). Jefferson: Salamander.

ILLINOIS. COOK Co.: Willow Springs, F. 1898. LAKE Co.: Beach, F.  
2560, 2098; Deerfield, F. 12999-13000, 14817; Highland Park, F. 17034.

INDIANA. LAKE Co.: Clark, F. 2439; Long Lake, F. 8865; Miller,  
F. 11140, 15580-2. PORTER Co.: Tremont, F. 13093, 13193; Wilson, F. 3340,  
11755, 13095-8.

This slender species, like the species of *Plethodontidae*, is found in  
rotten logs, and, in the Dunes, associates with *Plethodon cinereus*.

**Ambystoma maculatum** (Shaw). Spotted Salamander.

ILLINOIS. COOK Co.: Palos Park, F. 11875-6; Willow Springs, F. 1816.

LAKE Co.: Deerfield, A. 441, 1017-26, 1901-24, F. 14809-11, 17647, 16767, 20879; Highland Park, F. 20878.

INDIANA. PORTER Co.: Valparaiso, A. 1041.

Locally abundant, but on the whole, much less common than the tiger salamander, with which it generally does not associate. The ecological reasons for this separation are not known.

### **Ambystoma tigrinum tigrinum** (Green). Tiger Salamander.

ILLINOIS. COOK Co.: A. 221-2; Argo, F. 18174; Chicago, A. 322, F. 445, 483-4, 517, 1803, 2090, 2462, 3535, 4093-4, 4150, 4794, 5974, 6413, 8470, 11877, 12371, 13094, 22209; Evanston, F. 778; Homewood, F. 6566-8, 6761-5, 8471-2, 12695, 19204, 19484; Kenilworth, F. 643; Matteson, F. 18448; Palos Park, F. 2822; Willow Springs, F. 1816, 1899-1900, 2505, 2766, 22007; Wilmette, F. 8876. DUPAGE Co.: Downers Grove, F. 2721, 2802, 12606, 22010; Naperville, F. 22731. LAKE Co.: Deerfield, A. 1899-1900, F. 11465-6; Highland Park, F. 6562, 6759, 18065, 18177; Lake Forest, F. 11274; Pistakee Lake, A. 2596. McHENRY Co.: McHenry, F. 2622. WILL Co.: Wheatland Tp., F. 15975.

INDIANA. LAKE Co.: Hammond, F. 5936. PORTER Co.: Tremont, F. 13186.

WISCONSIN. WALWORTH Co.: Como Lake, F. 11036.

Experiments by Dr. Bertram G. Smith at Lake Forest, Illinois, strongly indicated that there is no spring migration of this species into the ponds for egg-laying (Smith, 1911). That this migration takes place in the fall is made probable by the numerous records of this species from cellars and cellarways in the Chicago Region in September and October. Smith's experiment certainly should be repeated for the autumn season.

We have used the trinomial form since the local tiger salamander is readily distinguishable by its black ground color with small distinct yellow spots and lateroventral yellow line from the larger western forms, which are grayer and tend to be vertically barred with black. The axolotl stage, which is frequent in western subspecies, does not occur in the Chicago Region.

### **Hemidactylium scutatum** (Schlegel). Four-toed Salamander.

ILLINOIS. COOK Co.: A. 262-5; Shermerville, F. 2851. LAKE Co.: Deerfield, F. 12997-8; Highland Park, F. 17033.

This extremely rare salamander, like the other Plethodontidae in this region, is found in or under rotten logs in woods.

### **Plethodon cinereus** (Green). Red-backed Salamander.

ILLINOIS. COOK Co.: A. 936-8; Glenview, F. 19256.

INDIANA. LAKE Co.: Miller, F. 2844. LAPORTE Co.: Michigan City, F. 8866. PORTER Co.: Beverly Shores, F. 19438; Dune Acres, F. 2764, 2805,

11973-4; Tremont, A. 995, F. 13187-92; Valparaiso, A. 959-91.

MICHIGAN. BERRIEN Co.: Warren Woods, A. 1797-9.

Very abundant in the moist woods bordering the Indiana Dunes in Porter County, where it is found under a large proportion of the decayed logs.

**Eurycea bislineata bislineata** (Green). Two-lined Salamander.

ILLINOIS. WILL Co.: Custer Park, A. 1573-4.

These two specimens collected by Norman Bergendahl appear to be the northernmost record for this species, which is abundant at Turkey Run, Indiana.

**Siren lacertina** Linnaeus. Siren.

INDIANA. PORTER Co.: Hebron, F. 18349.

The occurrence of this species in the Kankakee drainage is a natural northward extension of its range.

#### SALIENTIA—FROGS AND TOADS

**Bufo americanus americanus** (Holbrook). American Toad.

ILLINOIS. COOK Co.: Calumet City, F. 7797-8; Chicago, A. 141, 283, F. 403, 516, 957, 3021, 22207; Homewood, F. 8708-12, 8784; West Pullman, F. 2723; Wolf Lake, F. 3335, 17024. DUPAGE Co.: Downer's Grove, F. 12609-10, 12625; Glenn Ellyn, F. 394; Naperville, F. 7926. LAKE Co.: Deerfield, A. 1351-55, F. 11139; Fox Lake, F. 11592; Halfday, F. 19403; Highland Park, A. 434; Pistakee Lake, 2595, 2603; Volo, A. 1868; Waukegan, F. 2246. WILL Co.: Wheatland Tp., F. 5971, 6276-7, 7456-9.

**Bufo fowleri** Hinckley. Fowler's Toad.

ILLINOIS. COOK Co.: A. 127. KANKAKEE Co.: Aroma Tp., A. 2560-1; Pembroke Tp., 2593. LAKE Co.: Beach, A. 432, F. 2247, 3249, 8300; Highland Park, A. 433.

INDIANA. LAKE Co.: Illinois, F. 3358; Miller, F. 2855, 2829, 17025-7, 19242. LAPORTE Co.: LaPorte, F. 1918; Smith, A. 1865-6. PORTER Co.: Dune Acres, A. 1503-6, F. 4099; Wilson, F. 2965. STARKE Co.: Hamlet, 22663.

MICHIGAN. BERRIEN Co.: Stevensville, F. 19405.

This species, in our region, is probably limited to the sandy areas at Beach, the southern end of Lake Michigan, and south of the Kankakee River.

**Acris crepitans** Baird. Cricket Frog.

ILLINOIS. COOK Co.: Chicago, F. 389, 11223; Chicago Ridge, F. 3053, 3095; Homewood, F. 6532, 7799, 8785; Lambert, F. 3030, 3094, 3315; Palos



Park, A. 930. DUPAGE Co.: Glenn Ellyn, F. 392; Naperville, F. 22732. KANKAKEE Co.: Aroma Tp., A. 2562-75; Momence, A. 323-325. LAKE Co.: Beach, A. 1387-90, F. 2249, 2732, 3251; Grass Lake, A. 2604-5; Highland Park, F. 6752-4; North Chicago, F. 2733; Pistakee Lake, A. 1853-57. McHENRY Co.: Richmond, F. 17969-72. WILL Co.: Custer Park, A. 1574-5; New Lenox, F. 5570; Wheatland Tp., F. 6271-5.

INDIANA. LAKE Co.: Long Lake, F. 3436; Kankakee River, F. 317-319; Miller, F. 2830, 15577-8. LAPORTE Co.: LaPorte, F. 2126. PORTER Co.: Dune Acres, F. 3029, 2064; Tremont, F. 13195; Valparaiso, A. 992-993.

WISCONSIN. KENOSHA Co.: Camp Lake, A. 2612-33, F. 12627.

There seem to be ecological differences in the distribution of this species and of *Pseudacris triseriata*, which afford a definite problem for observation and experiment. At Homewood, Illinois, *P. triseriata* is found in shallow cat tail marshes, while *A. crepitans*, a few hundred yards away, is abundant in deeper gravel pit ponds. *Acris* is consistently found on the muddy banks of streams, requiring relatively little vegetation for cover. The two species appear to be to a considerable extent incompatible.

### *Pseudacris triseriata* (Maxmilian). Swamp Tree Frog.

ILLINOIS. COOK Co.: Chicago, F. 446, 498, 514, 1434, 3514, 3536, 11222, 22016; Homewood, F. 6912, 7420-31, 7469, 8634, 8713; Lemont, A. 1003-15; Palatine, A. 913; Palos Park, F. 3034, 8869-70, 11878, 11883. DUPAGE Co.: Downer's Grove, F. 12607-8; Naperville, F. 7919-20. KANE Co.: Elgin, F. 14804. LAKE Co.: Beach, F. 2106, 8867; Deerfield, A. 413-31, 450-500, 996-1000, 1879-95, 1928-1960, F. 11887-9, 16768; Fox Lake, F. 1872, 2099; Half Day, F. 19402; Highland Park, F. 6747-51, 8200. WILL Co.: Lockport, F. 2091; Wheatland Tp., F. 5951, 5969-70, 6269-70, 7447-9, 7467-8, 15996.

INDIANA. LAKE Co.: Hammond, F. 5933; Miller, F. 2845. PORTER Co.: Dune Acres, F. 3033, 4096; Tremont, A. 926, F. 13197.

MICHIGAN. BERRIEN Co.: Lakeside, A. 1399.

Generally restricted to ponds having ample vegetation for cover.

### *Hyla crucifer* Maximilian. Spring Peeper.

ILLINOIS. LAKE Co.: Beach, F. 2623; Deerfield, A. 1001-2, 1896-8, 1961-80, F. 11136, 11886, 11978, 12995-6, 13978.

INDIANA. PORTER Co.: Dune Acres, F. 2825; Tremont, F. 13196.

Found in woodland ponds during the spring, from which they often migrate to considerable distances in woods and fields.

### *Hyla versicolor versicolor* (LeConte). Tree Toad.

ILLINOIS. COOK Co.: A. 162-72; Chicago, F. 1797; Glendon Park, F. 1799; Willow Springs, F. 1798. LAKE Co.: Halfday, F. 19401; Highland Park, F. 6430, 6563.

INDIANA. LAKE Co.: Clark, F. 1448; Miller, A. 272. PORTER Co.: Dune Acres, A. 1860-64; F. 2824, 4097-8; Wilson, F. 3093, 3256, 11754.

MICHIGAN. BERRIEN Co.: Stevensville, F. 21034.

Also a woodland-pond species, slightly less tolerant to dry situations.

***Rana cantabrigensis cantabrigensis* (Baird). Wood Frog.**

ILLINOIS. LAKE Co.: Deerfield, A. 1027-40, 1925-7, F. 11890-3, 12994, 13975-7; Highland Park, F. 6745-6.

INDIANA. LAPORTE Co.: Smith, A. 1867. PORTER Co.: Tremont, F. 13194; Wilson, F. 3032.

MICHIGAN. BERRIEN Co.: Lakeside, A. 1400-16; Three Oaks, F. 3272; Warren Woods, A. 1779-96.

The criterion most employed for the distinction of *cantabrigensis* from *sylvatica* is the length of leg in proportion to that from snout to vent; the heel extending beyond the tip of the snout in *sylvatica*, and the length of the tibia more than half the length of the body, while in *cantabrigensis* the heel fails to reach the muzzle and the tibia is half or less than half the length of the body. In the Illinois and Indiana specimens available the tibia varies from .54 to .57 of the length of the body which corresponds to *sylvatica* as defined. Wisconsin specimens agree closely with these, the tibia ranging from .50 to .62 of the length of the body. In the color characters employed by Wright and Wright (1933, p. 32), however, our specimens clearly agree with *cantabrigensis* and not with *sylvatica*; and we prefer to regard these rather than leg length as diagnostic. Wood frogs from Alaska, Canada, and Labrador are much shorter legged than these middle western specimens, and we feel justified in reviving *Rana cantabrigensis latiremis* Cope for them.

***Rana catesbeiana* Shaw. Bull Frog.**

ILLINOIS. COOK Co.: Evanston, N. U. Campus, A. 174; Willow Springs, F. 2504. DUPAGE Co.: Naperville, F. 22733-4. LAKE Co.: Pistakee Lake, A. 1851-2.

INDIANA. LAKE Co.: Gary, F. 19230; Long Lake, F. 3439; Miller, F. 2843, 3438, 11134. LAPORTE Co.: LaPorte, F. 1919, 2119. PORTER Co.: Tremont, A. 928.

In ponds and rivers throughout the region, being limited only by the permanence of water. More abundant than the list indicates.

***Rana clamitans* Latreille. Green Frog, Cow Frog.**

ILLINOIS. COOK Co.: Chicago, F. 499, 502. DUPAGE Co.: Naperville, F. 7925, 22087. LAKE Co.: Beach, A. 1386, F. 8298, 8868; Fox Lake, F. 11591; Grass Lake, A. 2608-11; Nippersink, F. 12611-3. McHENRY Co.: McHenry, F. 2076, 2117; Richmond, F. 17975. WILL Co.: Marley, F. 5567; New Lenox, F. 5569.

INDIANA. PORTER Co.: Chesterton, A. 1858-9; Porter, F. 18347-8.

MICHIGAN: BERRIEN Co.: Three Oaks, F. 3270.

Found in practically all permanent bodies of water throughout the area.

***Rana palustris* LeConte. Pickerel Frog.**

INDIANA. PORTER Co.: Dune Acres, F. 3329; Wilson, F. 3254, 3314.

It is interesting to note that the species is absent in the western part of our area, reappearing in abundance in the western part of Illinois.

***Rana pipiens* Schreber. Leopard Frog.**

ILLINOIS. COOK Co.: Chicago, F. 80-4, 387, 444, 773, 947, 1790, 1875, 3534, 4095, 6412, 15490-2; Chicago Ridge, F. 3097, 8278; Homewood, F. 6417, 6569-71, 7419, 8547-51, 8552, 8635, 8714-5, 8786; Lambert, F. 3096; Lemont, A. 1869; Palatine, A. 912; Palos Park, A. 929; Willow Springs, F. 2092, 2585; Wolf Lake, F. 3334. DUPAGE Co.: Downer's Grove, F. 12626; Glenn Ellyn, F. 393; Lisle, F. 3253; Naperville, F. 7916-18. KANKAKEE Co.: Aroma Tp., A. 2546-59; Pembroke Tp., A. 2594. LAKE Co.: Beach, A. 1384-5, F. 2121, 2248, 3250, 8323; Deerfield, A. 436-40, F. 12992, 16769-74; Fox Lake, F. 1905, 11593-5; Grass Lake, A. 2606-7; Highland Park, A. 435, F. 6755-8; Pistakee Lake, A. 2597-2602. McHENRY Co.: McHenry, F. 1917, 1970, 2072; Richmond, F. 17973-4. WILL Co.: Wheatland Tp., 7446, 7460-6.

INDIANA. LAKE Co.: Hammond, F. 5934-5; Hessville, F. 4100-1; Long Lake, F. 3437. PORTER Co.: Dune Acres, F. 3328; Wilson, F. 3255.

MICHIGAN. BERRIEN Co.: Lakeside, A. 1398; Three Oaks, F. 3271.

WISCONSIN. KENOSHA Co.: Camp Lake, A. 2634-38.

This spotted frog is found throughout the area and does not require permanent water. It migrates far from water during the summer.

## REPTILIA

### SAURIA—LIZARDS

***Ophisaurus ventralis* (Linnaeus). Glass "Snake".**

ILLINOIS. COOK Co.: A. 19; Evanston, A. 18; Palos Park, F. 2971. KANKAKEE Co.: Pembroke Tp., A. 2650.

INDIANA. PORTER Co.: Dune Acres, A. 1987; Port Chester, F. 19261. STARKE Co.: Knox, A. 285.

The Glass "Snake" is well-known in local folk-lore and it seems likely that it was formerly much more abundant in this region. It has been found at both Dune Acres, Indiana and Pembroke Township, Illinois as recently as 1935.

***Cnemidophorus sexlineatus* (Linnaeus). Six-lined Swift.**

ILLINOIS. KANKAKEE Co.: Hopkins Park, A. 506; Pembroke Tp., A. 1530-32, 2581-4, 2590-2, F. 18188.

INDIANA. LAKE Co.: Clark, F. 1447; Miller, A. 281-2, F. 3347; Pine, F. 2624. PORTER Co.: Beverly Shores, F. 19436-37; Dune Acres, A. 1533, 1872-4, F. 4103, 22222; Ogden Dunes, A. 1875; F. 18175-6; Wilson, F. 2977, 3344, 3258, 4152, 17045.

Abundant populations of this species are found in two of the sand areas of our region, in the Indiana dunes and Kankakee sands, but it is absent at Beach, north of Chicago. Observations of its habits in our area are much to be desired.

**Eumeces fasciatus** (Linnaeus). Five-lined skink, Blue-tailed skink, Red-headed skink.

ILLINOIS. COOK Co.: A. 24; Chicago, F. 2849; Shermerville, 2850.  
INDIANA. LAKE Co.: Miller, A. 508.

The specimens of *Eumeces* which have been collected in our area have all been isolated individuals; no colony or population of these lizards is to be found nearer than Turkey Run, Indiana.

#### SERPENTES—SNAKES

**Heterodon contortrix** (Linnaeus). Hog-nosed Snake.  
Puff Adder.

ILLINOIS. COOK Co.: Chicago, F. 3001; Evanston, A. 33. KANKAKEE Co.: Momence, F. 1971, 14800. LAKE Co.: Beach, A. 1581, 2642, F. 1903, 3252. WILL Co.: Wilmington, A. 503.

INDIANA. LAKE Co.: Miller, F. 17029. PORTER Co.: Wilson, A. 909-10, 927, F. 1445, 3063, 3345.

This species, with its habit of rearing its head when alarmed, is subject to extermination in cultivated areas when mowing machinery is employed. Because of its habit of hissing and spreading this harmless snake is often considered poisonous, which fact has also led to a great reduction in its numbers. There may be some association with sandy soil in our area, but it is not at all exclusively confined to sand areas in its total range. The tracks of this species in dune sand exhibit an approximation to the "side-winding" mode of progression. The melanistic form is relatively rare in our area.

**Eurypholis vernalis** (Harlan). Grass snake, Green snake.

ILLINOIS. COOK Co.: A. 43-7, 509; Berwyn, F. 736, 777, 820, 16849; Beverly Hills, F. 2048, 15588; Chicago, A. 1365, F. 1441-3, 1928, 2999, 3407-8, 3415-6, 16145-8, 16150-8, 17031-2, 22086, 22227; Elmwood Park, A. 523-4; Evanston, A. 42; Homewood, 7835-8, 8789, 12538, 17649, 21755-6; Morgan Park, F. 3248, 3526; Park Ridge, F. 15675; Purington, F. 2195. LAKE Co.: F. 719, 16144.

WISCONSIN. WALWORTH Co.: Delavan, F. 19893.

Three specimens in the collection entirely lack the green color, being buffy brown. This would seem to be due to a loss of a blue element. A specimen from Glencoe, Illinois, apparently lacks yellow pigment, and is dark in color. The colors of one of the buff specimens (from Kenilworth, Illinois), matched in Ridgeway are as follows: general body tone, Wood Brown; top of head and mid-back between Buffy Brown and Olive Brown; pale pinkish brown beneath. The dark specimen is Pale Fluorite Green beneath, the lower half of the first scale row Light Turtle Green, above which the sides become French Green, darkening to Olivaceous Black (1).

Common even within the city limits of Chicago but strangely restricted in its range within our region. This gentle little snake is the commonest "pet snake" with children of Chicago.

***Coluber constrictor flaviventris* (Say). Blue Racer.**

ILLINOIS. COOK Co.: A. 58. KANKAKEE Co.: Hopkins Park, A. 510.

INDIANA. LAKE Co.: Miller, A. 278, 287, F. 2077. PORTER Co.: Dune Acres, F. 3275, 5949; Ogden Dunes, A. 1492, 1870; Tremont, A. 1493; Wilson, F. 5932.

As has been noted for the hog-nosed snake, the snakes which raise their heads and face mowing machinery tend to be exterminated in agricultural areas. The blue racer was certainly widely distributed through the Chicago region in former times. Its confinement to the two principal sand areas at the present we regard as due to extermination elsewhere rather than as a habitat preference. This swift snake attains a length of five feet, but few individuals are allowed to live in a metropolitan area such as ours, until they reach that size.

***Elaphe obsoleta obsoleta* (Say). Pilot Black-Snake.**

ILLINOIS. COOK Co.: Dalton, F. 19491; Worth, A. 290.

INDIANA. LAPORTE Co.: Smith, A. 2651. PORTER Co.: Valparaiso, F. 2082.

A climax forest form which should prove to be more abundant in the southeastern part of our area.

***Elaphe vulpina* (Baird and Girard). Fox Snake, Spotted Adder.**

ILLINOIS. COOK Co.: A. 90; Argo, F. 21739; Chicago, A. 945, 2644, F. 8279; Evanston, A. 65; Hazelcrest, F. 17843; Palos Park, F. 6219. LAKE Co.: Beach, A. 1490, 2503, F. 19171. DUPAGE Co.: Naperville, F. 22735. McHENRY Co.: McHenry, A. 1491. WILL Co.: Custer Park, A. 1595; Joliet, F. 2461; Wheatland Tp., F. 3367.

INDIANA. LAKE Co.: Illinois, F. 3353-4; Liverpool, F. 2675, 2697. PORTER Co.: Dune Acres, F. 3264; Mineral Springs, A. 1871; Wilson, F. 3062, 3236.

This harmless spotted snake, often erroneously called "copperhead" and "spotted adder" is frequently found in cultivated areas, attracted apparently by the proportionate increase in small rodents. It regrettably is usually considered poisonous, and has been killed off in great numbers.

*Pituophis sayi sayi* (Schlegel). Bull Snake.

ILLINOIS. KANKAKEE Co.: Pembroke Township, A. 2037-8, F. 22221.

The area centering about Pembroke Township, where it is rather common in the sandy oak-covered areas, seems to be the only island of *Pituophis* in this region. This is the largest snake in our area, attaining a length of six feet.

*Lampropeltis t. triangulum* (Lacépède). Milk Snake.

ILLINOIS. COOK Co.: Beverly Hills, F. 1446, 5920; Chicago Ridge, F. 8280; Edgebrook, F. 2991, 3000; Kenilworth, F. 642; Northbrook, F. 22667; Richton Park, F. 21758; Willow Springs, F. 19524. DUPAGE Co.: Glenn Ellyn, F. 2789; Hinsdale, F. 1560. LAKE Co.: Deerfield, A. 2643, F. 11372, 14806; Grass Lake, A. 291. WILL Co.: Joliet, F. 2432.

INDIANA. LAKE Co.: Miller, F. 2110. PORTER Co.: Chesterton, A. 1877; Tremont, F. 2963.

WISCONSIN. KENOSHA Co.: Camp Lake, A. 1392. WALWORTH Co.: Delavan, A. 526.

Like the fox snake, this highly beneficial snake is persecuted both as a "milker" of cows, and as a deadly serpent. It is one of our most important species economically. The young of this spotted snake is one of the most brightly colored reptiles of our area.

*Natrix grahamii* (Baird and Girard). Graham's Water Snake.

ILLINOIS. COOK Co.: Chicago, F. 7791, 17033, 17609; Glenview, F. 18538; Matteson, F. 16128.

Both this and the following species are quite rare, and no life history data are available.

*Natrix kirtlandii* (Kennicott). Kirtland's Water Snake.

ILLINOIS. COOK Co.: Chicago, A. 1349, F. 17610; Chicago Ridge, F. 2975, 16127; Evanston, F. 2989, 16126.

INDIANA. PORTER Co.: Dunes Acres, F. 3060.

This is the only species in our list whose type locality lies within the Chicago region. The exact type locality, not stated, is probably West Northfield, Cook County. Our Illinois series may be regarded as topotypical.

**Natrix septemvittata** (Say). Queen Snake. Leather Snake.

ILLINOIS. COOK Co.: Bowmanville, F. 2974; Evanston, A. 89, F. 2990, 16136; Lambert, F. 3035, 3061, 3074-81, 3316, 3405, 16131-4, 16137-41; Palos Park, F. 8740; Willow Springs, F. 2506. DUPAGE Co.: Glenn Ellyn, A. 2031, 2529-36; Naperville, F. 11225, 15937, 17645. LAKE Co.: Beach, F. 2730; Glen-coe, F. 2731, 16135. WILL Co.: New Lenox, F. 2816, 2820, 16130.

INDIANA. PORTER Co.: Valparaiso, A. 1417-8, F. 18671.

WISCONSIN. WALWORTH Co.: Delavan, A. 501-2.

Distributed in quarries and streams with limestone slabs, except where these are too popular as recreational areas.

**Natrix sipedon sipedon** (Linnaeus). Common Water Snake.

ILLINOIS. COOK Co.: Chicago, F. 537; Lambert, F. 3082; Worth, A. 275. DUPAGE Co.: Glenn Ellyn, F. 395; Naperville, F. 7933, 17644. KANKAKEE Co.: Rock Creek, F. 19903. LAKE Co.: Beach, A. 1366, F. 2437. WILL Co.: New Lenox, F. 2818-9.

INDIANA. LAKE Co.: Miller, F. 17028. PORTER Co.: Chesterton, A. 1878.

There seems to be no ecologic restriction of this species in water habitats. It is much more common than the list indicates. Like many of our harmless snakes, it too, is considered poisonous and given the name of "mocassin".

**Storeria dekayi** (Holbrook). DeKay's Snake.

ILLINOIS. COOK Co.: A. 96-101, 397-9; Berwyn, F. 822; Beverly, F. 1930; Chicago, A. 916, 1364, F. 717, 3409, 14813, 22769-70; Edgebrook, F. 2787; Evanston, A. 148; Homewood, F. 7839, 8788, 12437, 13198, 17648; Lemont, A. 1804-5; Longwood, F. 2495, 22773; Pullman, F. 2672; Riverdale, F. 17132; Summit, F. 804; Willow Springs, F. 3273, 19400, 22771-2. DUPAGE Co.: Downer's Grove, F. 12540, Ingaltan, 22736-7. KANKAKEE Co.: Pembroke Tp., F. 19220. LAKE Co.: Pistakee Lake, F. 13185; Volo, A. 1835. WILL Co.: New Lenox, F. 2976.

INDIANA. LAKE Co.: Clark, F. 2194, 22761; Hessville, F. 21707-11; Pine, F. 2837, 22762-3. PORTER Co.: Tremont, A. 907-8, 1982-3; Wilson, F. 3440, 22774.

WISCONSIN. KENOSHA Co.: Silver Lake, A. 1577.

A common snake, apparently but little affected by civilization. It is often found well within the city limits of Chicago on vacant lots, where it usually hides under debris. Its small size, seldom exceeding one foot, its drab brown color, and nocturnal habits probably account for its persistence in such populated areas.

**Storeria occipito-maculata** (Storer). Red-bellied Snake.

ILLINOIS. COOK Co.: A. 121-4; Braeside, F. 15698, 15812, 18052-64; Niles Center, F. 19317; Palos Park, F. 2972-3; River Forest, F. 3289; Willow Springs, F. 19399. LAKE Co.: Deerfield, F. 11403.

The restriction of this species in the Chicago Region to the morainal ridge to the northwest of Chicago is surprising and not readily explicable.

***Thamnophis butleri* (Cope).** Butler's Garter Snake.

A specimen in the Milwaukee Public Museum Collection (No. 2034) is from Corliss, Racine County. The distribution of this species is discussed by Davis (1932). Additional records from the northern counties of our area are to be expected.

***Thamnophis radix* (Baird and Girard).** Plains Garter Snake.

ILLINOIS: COOK Co.: Argo, F. 3317, 21801-5; Berwyn, F. 776, 822, 1496, 2126, 2699; Beverly Hills, F. 11226-9, 15583-6, 19786; Braeside, F. 15697, 15704, 16055; Chicago, A. 1424-30, F. 90, 390, 467, 497, 536, 1435-8, 1444, 11213-21, 16066-71, 17034, 17611-4, 17633-42, 22668-70; Chicago Lawn, F. 2438; Chicago Ridge, F. 2962, 3092, 3330, 8281-2; Edgebrook, A. 911; Forest Park, F. 3091; Homewood, F. 6418, 6453, 6906, 7792-3, 7826-34, 8059, 8289, 8469, 8787, 8935, 16053-4, 19442; Lemont, F. 2967; Longwood, F. 2190, 2494; Maywood, A. 511; Morgan Park, F. 7799-7800, 13697; Palos Park, F. 1439, 2961; Riverdale, F. 648; River Forest, F. 3288, 3343, 16059-65, 21817-8; Riverside, F. 5960; Summit, F. 21256-7; Willow Springs, F. 1914, 2502-3, 2932; Winnetka, F. 22596-635; Wolf Lake, F. 15563-4, 21746. DUPAGE Co.: Lombard, F. 3286-7, 3331, 21812-4; Naperville, F. 7450, 8658, 19936, 19938, 22050; Villa Park, A. 1420-3. KANKAKEE Co.: Pembroke Tp., A. 2589. LAKE Co.: Beach, A. 1367-70; Deerfield, F. 17703-5; Fox Lake, F. 1896; Grass Lake, A. 1803; Volo, A. 1836; Waukegan, F. 2436. McHENRY Co.: Richmond, F. 17976-7. WILL Co.: New Lenox, F. 2817, 2968; Wheatland Tp., F. 7455.

INDIANA. LAKE Co.: Hessville, F. 21712; Illinois, F. 3355. PORTER Co.: Dune Acres, F. 4104; Valparaiso, A. 994.

Neither this species nor the common garter snake seem to have definite habitat preferences. Both are found together in the greater part of our area, but *radix* becomes quite rare in the Indiana Dunes, and it appears that the eastern limit of its range falls within our area.

***Thamnophis sauritus proximus* (Say).** Ribbon Snake.

INDIANA. LAKE Co.: Miller, F. 2923, 15576. PORTER Co.: Wilson, F. 3057, 3341.

We follow Blanchard in allocating our specimens to *proximus*, although specimens from the Chicago Area may be expected to exhibit intergradation between *proximus* and *sauritus*. One of our specimens has eight upper labials on each side (the key character of *proximus*), while the three others have seven on one side and eight on the other and thus exhibit a tendency toward *sauritus*. Additional specimens of this species are required to determine its status in this region.



**Thamnophis sirtalis sirtalis** (Linnaeus). Common Garter Snake.

ILLINOIS. COOK Co.: A. 111-3, 120, 369-74; Berwyn, F. 1398; Beverly, F. 15587; Braeside, F. 15705-12, 16056-7, 16072; Chicago, A. 1848-9, F. 716, 2488, 2919, 2921, 17615-32; Chicago Ridge, F. 2931, 3086-7; Evanston, A. 92, 117-8; Homewood, F. 7795-6, 8288, 16072; Lambert, F. 3085; Lemont, A. 1806; Morgan Park, F. 15697; Niles Center, F. 19316; Northbrook, F. 22671-2; Palatine, A. 1419; Palos Park, F. 1438, 2821, 2960; Summit, F. 21253-5; Wolf Lake, F. 3349-50; Worth, F. 2814. DUPAGE Co.: Downer's Grove, F. 12541; Naperville, F. 7934, 19935, 19937; West Chicago, A. 2032-3. KANKAKEE Co.: Kankakee, F. 19177. LAKE Co.: Beach, A. 1371-83, 2540-5, F. 2250; Fox Lake, A. 285; Fox River Grove, F. 19273; Highland Park, A. 442-5; Pistakee Lake, F. 13184; Volo, A. 1833-4. McHENRY Co.: Richmond, F. 17978-9 Woodstock, F. 11224. WILL Co.: Protone, F. 16072.

INDIANA. LAKE Co.: Hammond, F. 2081; Illinois, F. 3356, 3476; Miller, F. 2109; Pine, F. 2074; Wolf Lake, F. 2942. LAPORTE Co.: LaPorte, A. 2652. PORTER Co.: Dune Acres, F. 3059, 3036; Tremont, A. 527-8, 925, 1984; Wilson, F. 2933, 2969, 3090, 3257, 3295, 3326-7, 3342, 3348, 3351, 3441, 8295. STARKE Co.: Hamlet, F. 22664.

MICHIGAN. BERRIEN Co.: Lakeside, A. 1396-7.

WISCONSIN. WALWORTH Co.: Lauderdale, F. 500.

A considerable proportion of the Indiana dunes population of *sirtalis* has the skin between the scales predominately red, but does not approach the bright coloration of *parietalis*. It seems possible that there is some genetic connection of these red-sided specimens with the western subspecies. A specimen from Fox River Grove is entirely black like specimens from Ontario and the vicinity of Lake Erie.

**Sistrurus catenatus catenatus** (Rafinesque). Massasauga.

ILLINOIS. COOK Co.: A. 133-4; Wheeling, A. 505, F. 15931. LAKE Co.: Deerfield, A. 1431-3, F. 11380.

INDIANA. PORTER Co.: Beverly Shores, F. 19435; Dune Acres, A. 384-92, F. 6530; Tremont, A. 2502; Wilson, A. 326-31.

WISCONSIN. WALWORTH Co.: Delavan, F. 12698.

The distribution of the massasauga, in our region, falls into two distinct areas, one in the Indiana Dunes, and the other along the upper Desplaines. In the first named area, the species is associated with tamarack bogs, while in the latter it is in a river bottom habitat. The species seldom exceeds three feet in length.

## TESTUDINATA—TURTLES

**Sternotherus odoratus** (Latreille). Musk Turtle, Stink-pot.

ILLINOIS. COOK Co.: A. 2505; Homewood, F. 4092; Wolf Lake, F. 12617. KANKAKEE Co.: Momence, F. 323. LAKE Co.: Fox Lake, A. 2585-6, F. 22226; Nippersink, F. 11749; Round Lake, F. 19247.

INDIANA. LAKE Co.: Crown Point, F. 12696; Illinois, F. 3352; Kankakee R., F. 316; Long Lake, F. 22757; Miller, F. 2853.

**Chelydra serpentina** (Linnaeus). Snapping Turtle.

ILLINOIS. COOK Co.: Butterfield Creek, F. 17030. DUPAGE Co.: Downer's Grove, F. 22738; Glenn Ellyn, A. 1488-9. KANE Co.: Elgin, F. 8864. LAKE Co.: Beach, A. 1363; Fox Lake, F. 1906; Highland Park, F. 8108.

INDIANA. LAKE Co.: Crown Point, F. 11016; Kankakee River, F. 315. WISCONSIN. WALWORTH Co.: Lauderdale, F. 501.

Found in all streams and ponds, and, next to the painted turtle, the commonest species within the area. Its actual abundance is not conveyed by the list of specimens.

**Clemmys guttata** (Schneider). Spotted Turtle.

INDIANA. LAPORTE Co.: LaPorte, F. 2100, 22072-3; Smith, A. 2641. PORTER Co.: Dune Acres, A. 1832, F. 3037-8; Tremont, F. 14977; Wilson, F. 3039-44, 3320-5, 7434-6.

This species appears to reach the western-most limit of its distribution in the Indiana Dune Region. No recent collectors have found it in Wisconsin and we believe Higley's records (1889) from Walworth County (within our area) and other localities in Wisconsin, to be due to some error. The species is abundant at the Indiana localities above recorded.

**Emys blandingii** (Holbrook). Blanding's Turtle.

ILLINOIS. COOK Co.: Chicago, F. 3247; Homewood, F. 19191; Orland Park, 15696. DUPAGE Co.: Lisle, F. 22576. KANKAKEE Co.: Mokence, 15673. LAKE Co.: Beach, A. 1356-9, 1830, 1876, 1981, 1985, 2504, F. 2245, 5953, 15910; Lake Forest, F. 2435; Pistakee Lake, A. 1831; Voio, A. 1847. MCHENRY Co.: Woodstock, A. 1578.

INDIANA. LAKE Co.: Long Lake, F. 11046. JASPER Co.: DeMotte, F. 11230. PORTER Co.: Dune Acres, A. 1986; Wilson, F. 3046, 3346, 5952, 7433.

WISCONSIN. WALWORTH Co.: Elkhorn, F. 21690.

This semi-box turtle is abundant in sloughs during spring, but often difficult to find in summer and fall when it does not seem averse to a land existence.

**Terrapene carolina** (Linnaeus). Box Turtle.

INDIANA. LAPORTE Co.: Oakland, F. 8268-9; Smith, A. 1807. PORTER Co.: Dune Acres, A. 1808, F. 2831; Tremont, F. 6414, 15447.

We reject the Walworth County records in Wisconsin for this species, as for the spotted turtle, until additional specimens can be collected. The box turtle is too conspicuous a form to be likely to escape collectors, and it does not appear to have been recorded from Wisconsin.

since 1890 with the exception of the record of Cahn (1929) from Waukesha County.

***Terrapene ornata* (Agassiz). Ornate Box Turtle.**

ILLINOIS. KANKAKEE Co.: Pembroke Tp., A. 2580, 2654.

INDIANA. JASPER Co.: DeMotte, F. 11049.

This western species occurs in distinctively isolated populations, associated with sandy areas, east of the Mississippi. It ranges in such areas as far eastward as Lake Maxinkukee, Indiana. It is thus most remarkable that it does not occur in the Indiana Dune region, where *Terrapene carolina* is abundant.

***Graptemys geographica* (LeSueur). Geographic Turtle.**

ILLINOIS. KANKAKEE Co.: Kankakee River, F. 20784, 22636. LAKE Co.: F. 22080.

INDIANA. LAKE Co.: Deep River, F. 12689. PORTER Co.: Hebron, F. 17842.

***Chrysemys picta marginata* (Agassiz). Painted Turtle.**

ILLINOIS. COOK Co.: Chicago, F. 469, 524, 2614, 8292-4; Lemont, F. 2834; Palos Park, F. 11880; West Pullman, F. 2724, 5990; Wolf Lake, F. 12539. DUPAGE Co.: Lombard, F. 3332; Naperville, A. 2640, F. 7451, 17841. KANKAKEE Co.: Aroma Tp., 2577-8. LAKE Co.: Beach, A. 1814, 1829, 1360-2, F. 2727, 8291; Burton Bridge, F. 19311; Cary, F. 21946; Fox Lake, A. 2587-8, 2639, F. 22224-5; Grass Lake, A. 1809-13; Highland Park, F. 6760; Nippersink, F. 12614-16; Volo, A. 1837-46, F. 8863, 15671; Waukonda, F. 15468. MCHENRY Co.: McHenry, F. 2116.

INDIANA. JASPER Co.: DeMotte, F. 11026. LAKE Co.: Crown Point, F. 11017-8, 11021-4; Deep River, F. 12690-2; Miller, F. 2832-3, 2852, 11155-7, 11884, 15575. LAPORTE Co.: LaPorte, F. 22071. PORTER Co.: Dune Acres, F. 3318-9; Hebron, F. 12700; Kankakee R., F. 294-7, 299, 301-11; Wilson, F. 2966, 3045, 5937-8.

The Illinois specimens in the above list are to be regarded as intergrades between *C. picta marginata* and *C. picta bellii*, as has been shown by Bishop and Schmidt (1931).

***Pseudemys troostii* (Holbrook). Cumberland Terrapin.**

ILLINOIS. KANKAKEE Co.: Aroma Tp., A. 2576.

The use of turtle traps has turned up several specimens of this species barely in time for inclusion in this paper. It is clear that a definite survey of the turtle population in local waters by this method is the best available means of establishing the ranges of local species. We suspect that *Pseudemys troostii* reaches its northern limit in this region.

***Amyda spinifera* (LeSueur).** Soft-shelled Turtle, Leatherback.

ILLINOIS. COOK Co.: Chicago, F. 346. KANKAKEE Co.: Aroma Tp., A. 2579; Momence, F. 324.

INDIANA. LAKE Co.: Crown Point, F. 12688.

Also more abundant in both ponds and streams than this list indicates. The difficulty of capture, with the fact that turtle-trapping which is the only effective way of obtaining representative collections of turtles, has just been started, account for this discrepancy.

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